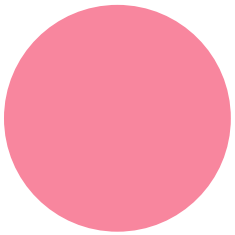
user experience workshop

Alan Dix

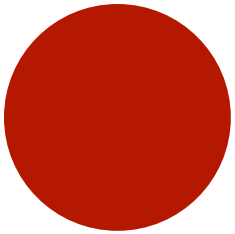
Talis & Lancaster University

http://www.hcibook.com/alan/

key to slides ...



time for an exercise



new topic about to start

why user experience?

emotion matters!

clinical images of technology vs. Facebook?
1980s phone brick vs. iPhone

emotion is part of being human

not new?

from early days (inc. iso 9xxx):

efficiency

effectiveness

satisfaction

often ignored

business value

for employees

happy users are productive users

for customers

happy users are buying users!

why UX now?

service orientation

never had it so good?

service orientation

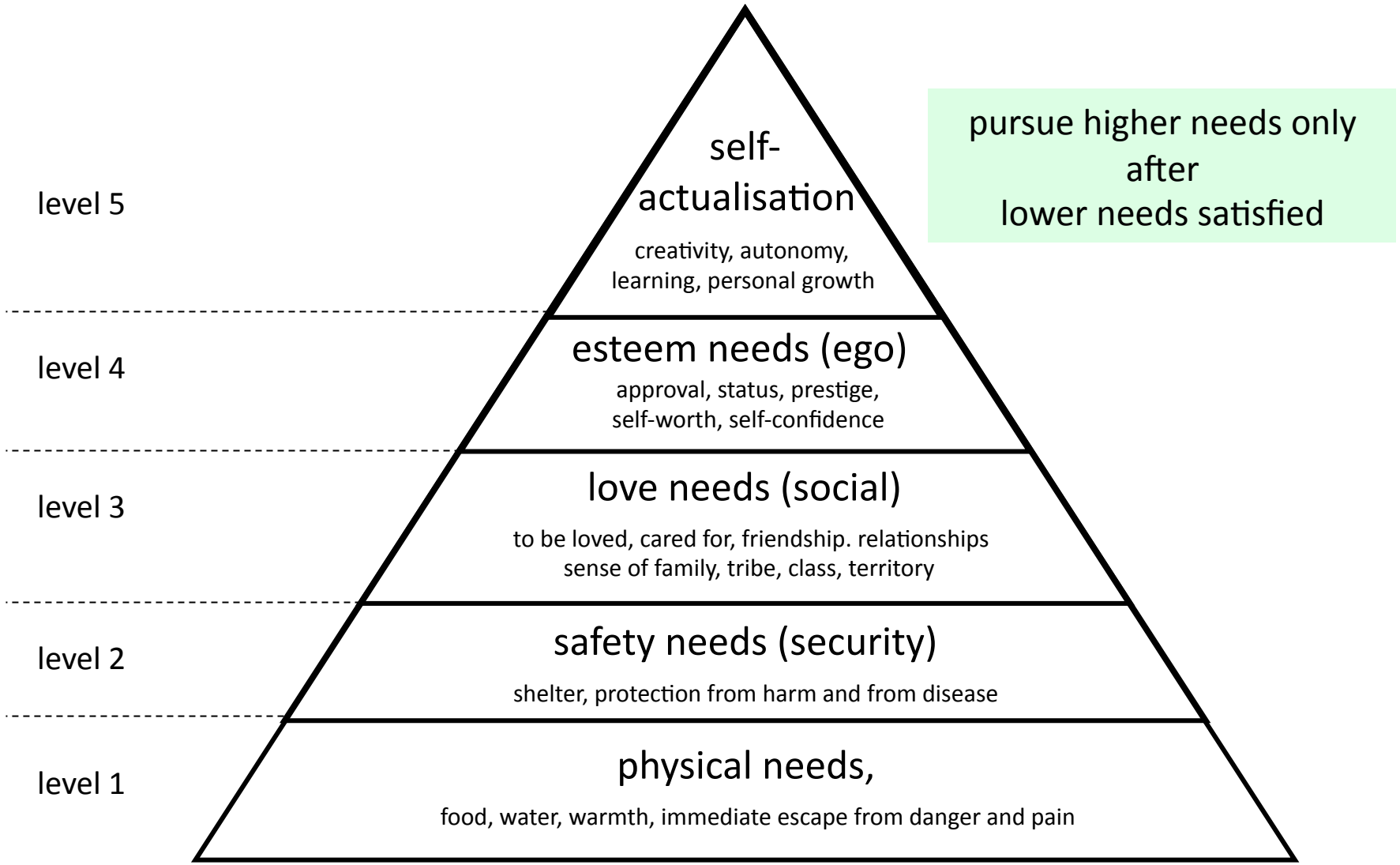
internet => service rather than product

service => more frequent user choice

more choice => usability and UX critical

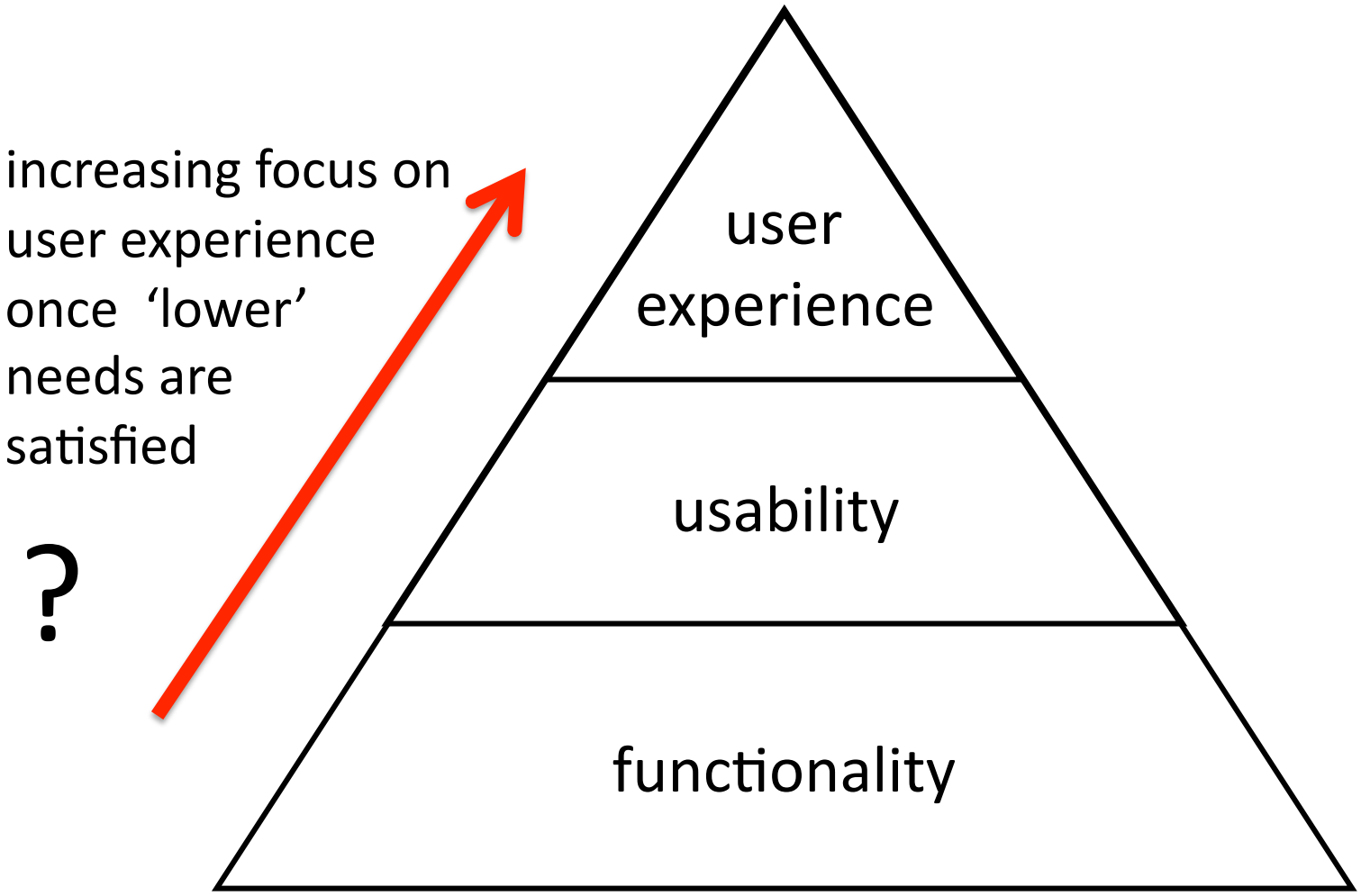
never had it so good?

Maslow's hierarchy of needs



pursue higher needs only after lower needs satisfied

… and for user interfaces?



is this right?

western obsession with slimming?

what if I talk on into middle of coffee break?

... Apple strong focus on UX,
but usability and functionality suffer

when feelings matter

emotion in interfaces

primary goal

- eliciting emotion is the **purpose** of the product

  e.g. art, games, entertainment

- may need more functional support

  e.g. efficient TV remote, Flickr image uploader

secondary goal

- some other primary purpose
- but emotions help

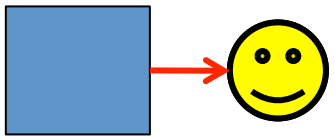
  e.g. alertness in repetitive job, motivation in learning

N.B. overlap, e.g. online shopping

systems and emotion input/output

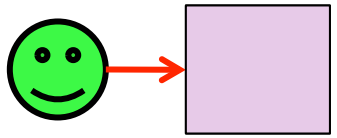
elicit emotion

- designed to create a feeling
  - e.g. dependability for bank, excitement for holiday



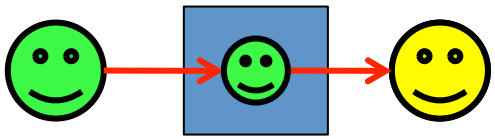
detect and respond to emotion

affective computing



- detect emotion
  - e.g. physiological sensing, language, facial expressions
- modify and adapt the system
  - e.g. if game player bored increase the difficulty

act as conduit for emotion



- record or transmit users own emotions
  - e.g. emoticons in IM

example application areas

games, toys and companions,
education, arts,
home, intimacy

games

emotion is the primary focus, aim to elicit emotion

Snood

like bar-game ‘bubbles’

but the faces make it feel different

education

emotion secondary goal, aim to elicit emotion

- games and edutainment
- extrinsic vs. intrinsic motivation
- persuasive interfaces

the home

emotion is the primary focus, aim to elicit emotion

place of frenzied activity and place of calm

work of living and pleasure of life

the right colours, the right designs

big consumer area:

e.g. Philips Ambilight

intimacy

emotion is the primary focus, aim to mediate emotion

- loved ones far away
  - friends, family, partners
- can technology bring people nearer
  - social networking
  - wearable and ubiquitous technology

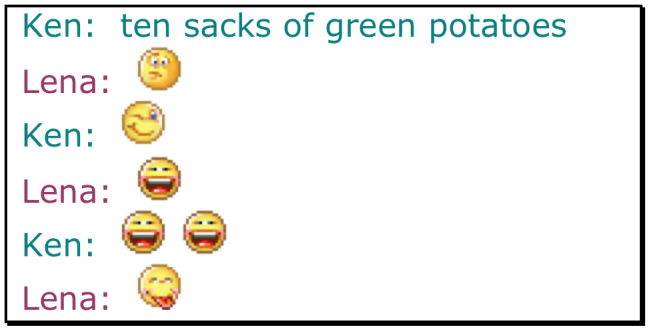
inTouch

Scent Whispers

expressing affect and identity

explicit expression – mediate emotion

- emoticons



- CAPITALISATION

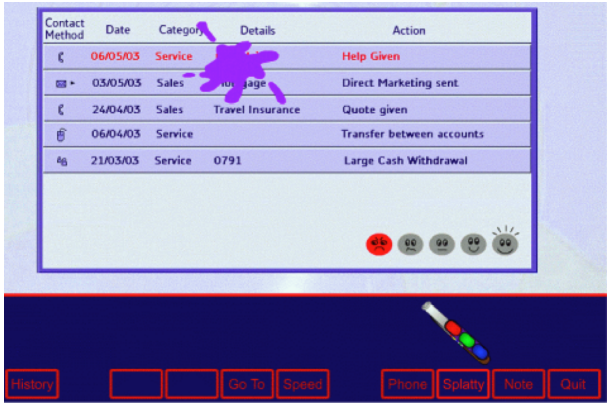
- drawing

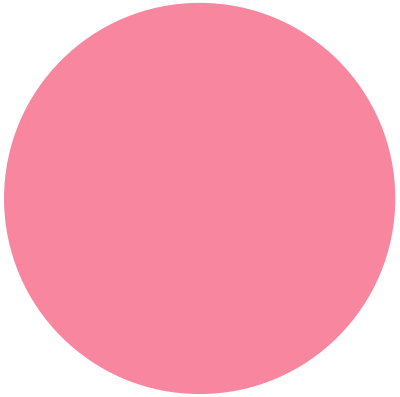
expressing affect and identity

expression through action – detect emotion

SenToy

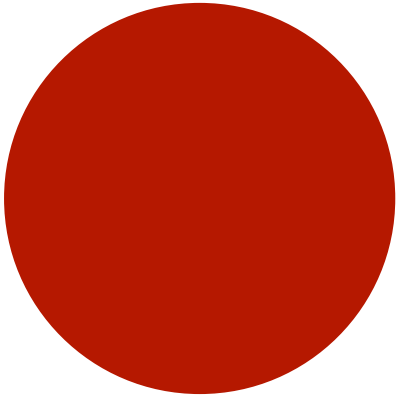
the Splatty





EXERCISE

- individually
  - think of two ‘experiences’ (good or bad)
    - one with technology
    - one without
- in small groups (2-4 people)
  - discuss your experiences with one another:
    - is experience primary or secondary goal?
    - where does the emotion fit in Maslow?
    - (for technology experiences)
      does it elicit, detect or mediate emotion?



theories of emotion, motivation and experience

psychology, physiology, sociality
reason and emotion, Maslow's hierarchy of needs,
taking play seriously, left/right brain,
experience and enchantment

kinds of emotion

psychologists distinguish:

- emotion
  - physiological and neurological state of the body
- feeling
  - subjective experience
- mood
  - longer term positive or negative feelings
    - based on chemical and other factors in the body

kinds of emotion (2)

- basic emotions

  e.g. fear, anger and happiness

  – shared with many animals

  – limbic system of the brain (aka. 'reptile' brain)

- complex emotions

  e.g. shame, anxiety, and regret

  – higher parts of the brain

  making sense of lower emotions and influencing them

kinds of emotion (3)

- arousal
  - flight or fight response
    - heart rate, dilation of blood vessels, adrenaline
  - same physiological state for fear and laughter
- valance
  - direction: positive or negative
  - harder to detect from physiological signs
    - can use facial expression, voice, vocabulary (semantic)

reason and emotion

emotion is essential for reasoning

- Mr Spock? real case ‘Elliot’ tumour cut off emotion

  IQ perfect, but couldn’t make decisions

- not just random!

  ‘gut’ feelings are heuristic

  ... but fast!

also regulates

- motivation and focus

  keeps us on the job

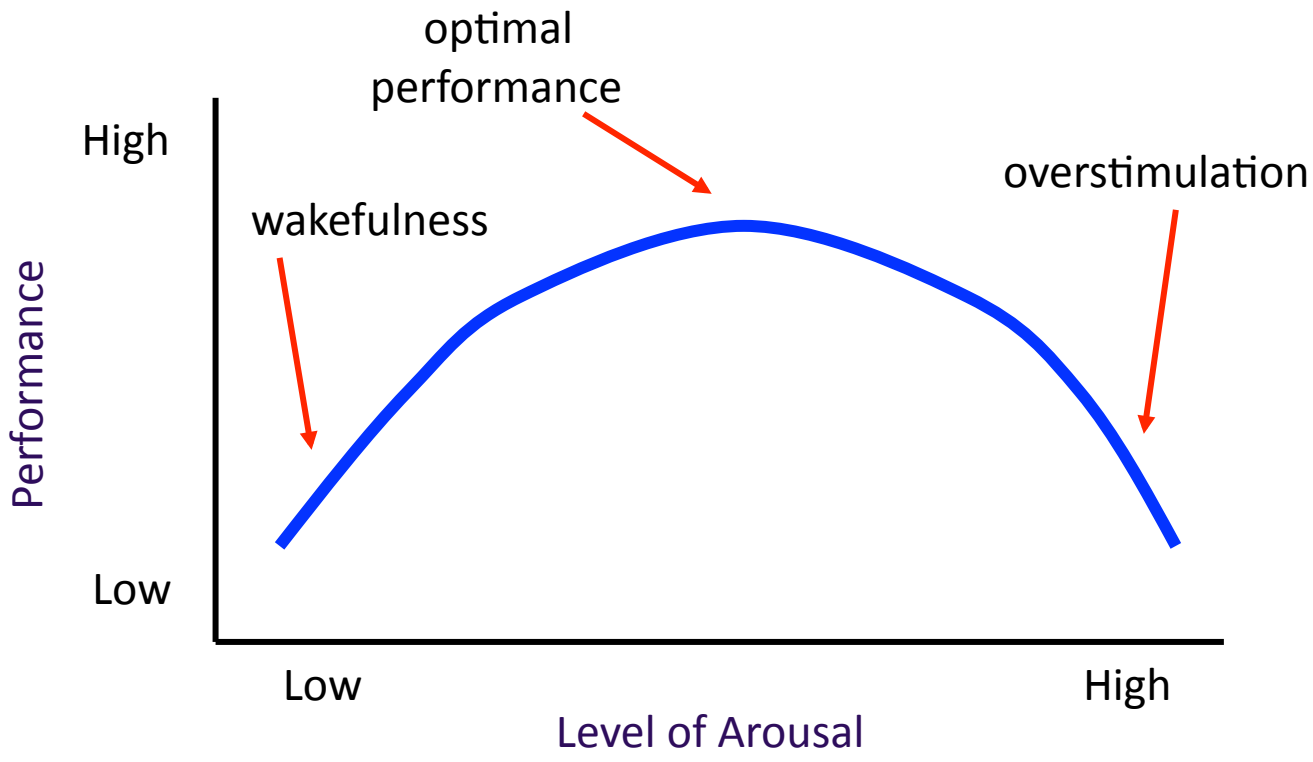
- boredom

  changing tack when stuck

the happy mean

Yerkes–Dobson curve

– best performance at medium arousal



the happy mean

Yerkes–Dobson curve

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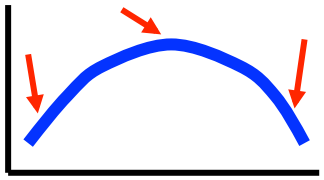
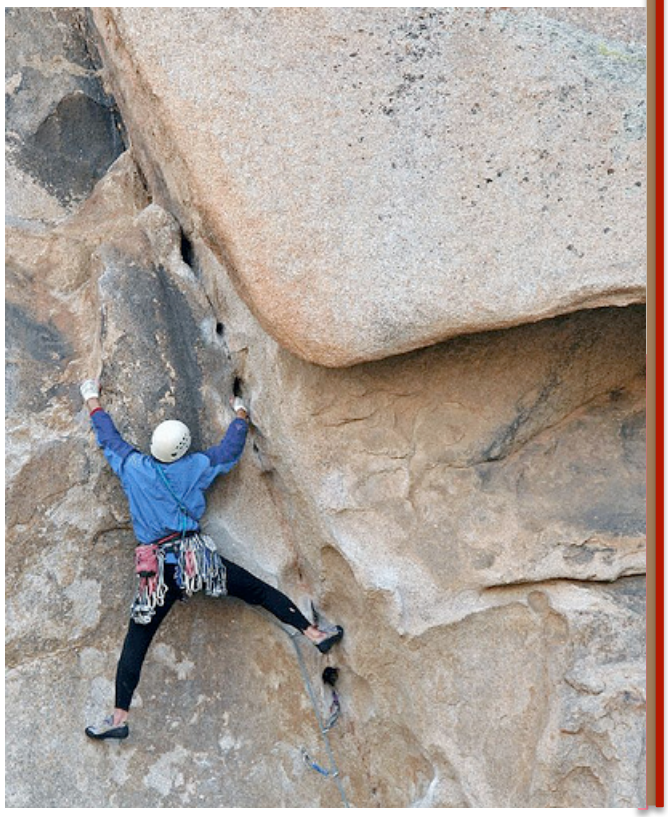


flow (Csikszentmihalyi)

- understanding experience
- between boredom and anxiety



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the happy mean

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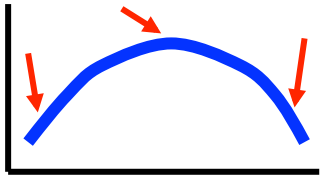

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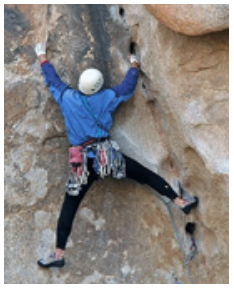


zone of proximal development (Vygotsky)

– education – at the edges of knowledge

experience and enchantment

(McCarthy and Wright)

four threads of experience

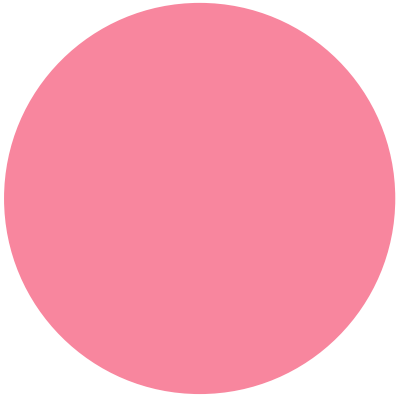
- sensual – visual, aural, tactile
- emotional – feelings, relationships
- compositional – integrity, coherence
- spatio-temporal – sense of time and location

experience and enchantment (2)

(McCarthy and Wright)

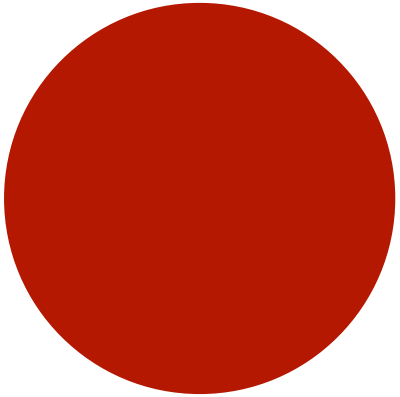
six processes of sense-making

- anticipating – what is going to happen
- connecting – pre-cognitive sensation
- interpreting – complex emotions
- reflecting – looking back
- appropriating – interweaving into life
- recounting – telling others



EXERCISE

- in your groups
  - do any of these theories help you to understand/express your experiences



designing experience?

crackers – a case study

designing experience

- real crackers
  - cheap and cheerful!
  - bad joke, plastic toy, paper hat
  - pull and bang

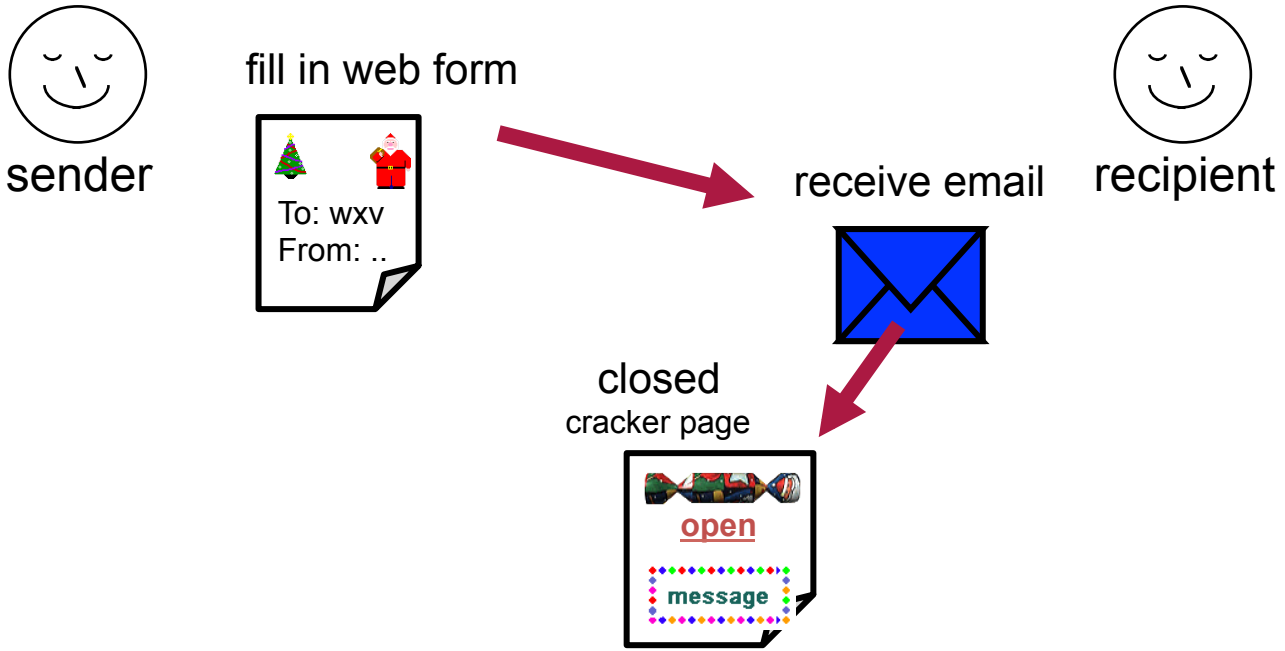
designing experience

- virtual crackers
  - cheap and cheerful
  - bad joke, web toy, cut-out mask
  - click and bang

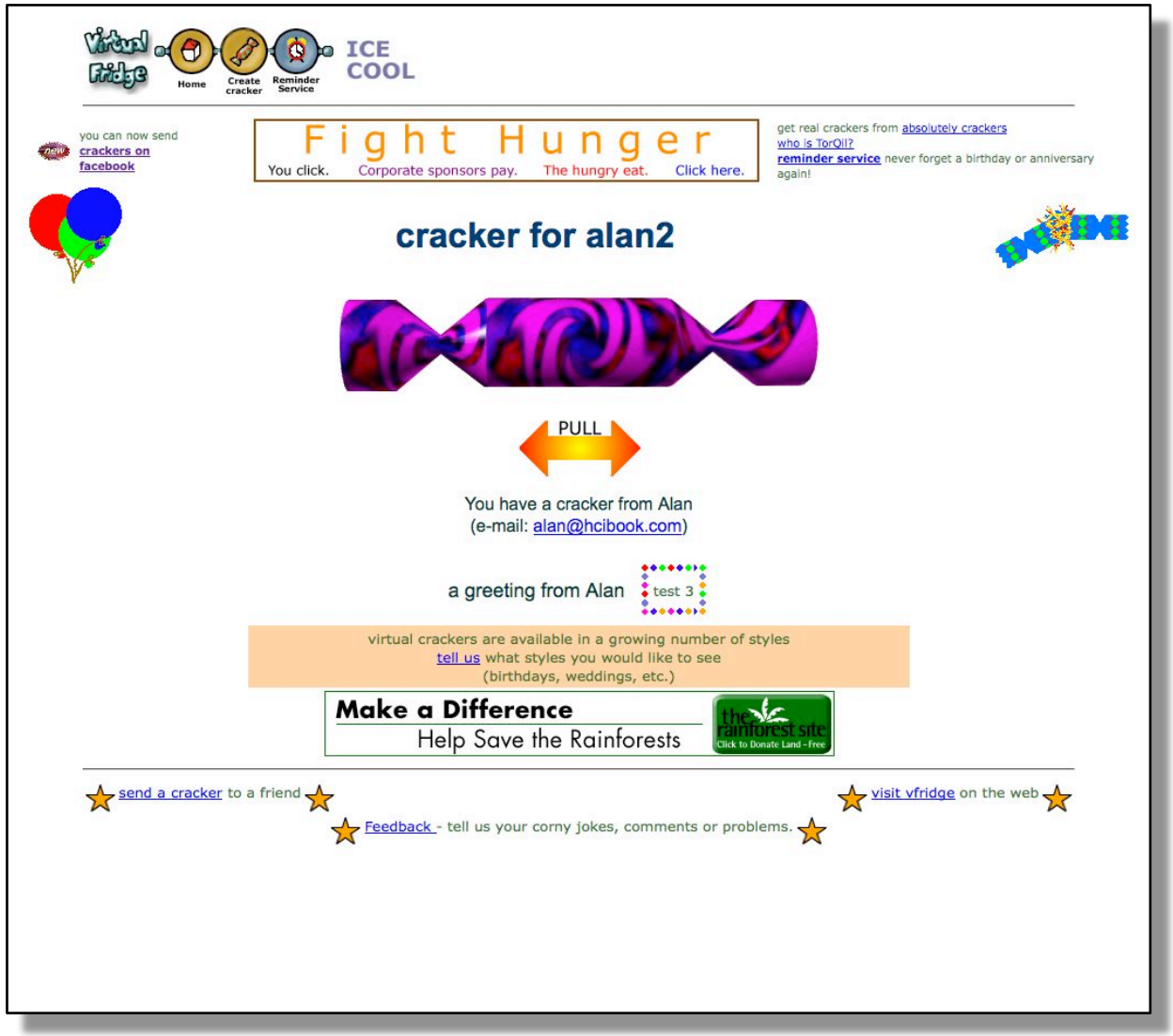
designing experience

- virtual crackers
  - cheap and cheerful
  - bad joke, web toy, cut-out mask
  - click and bang

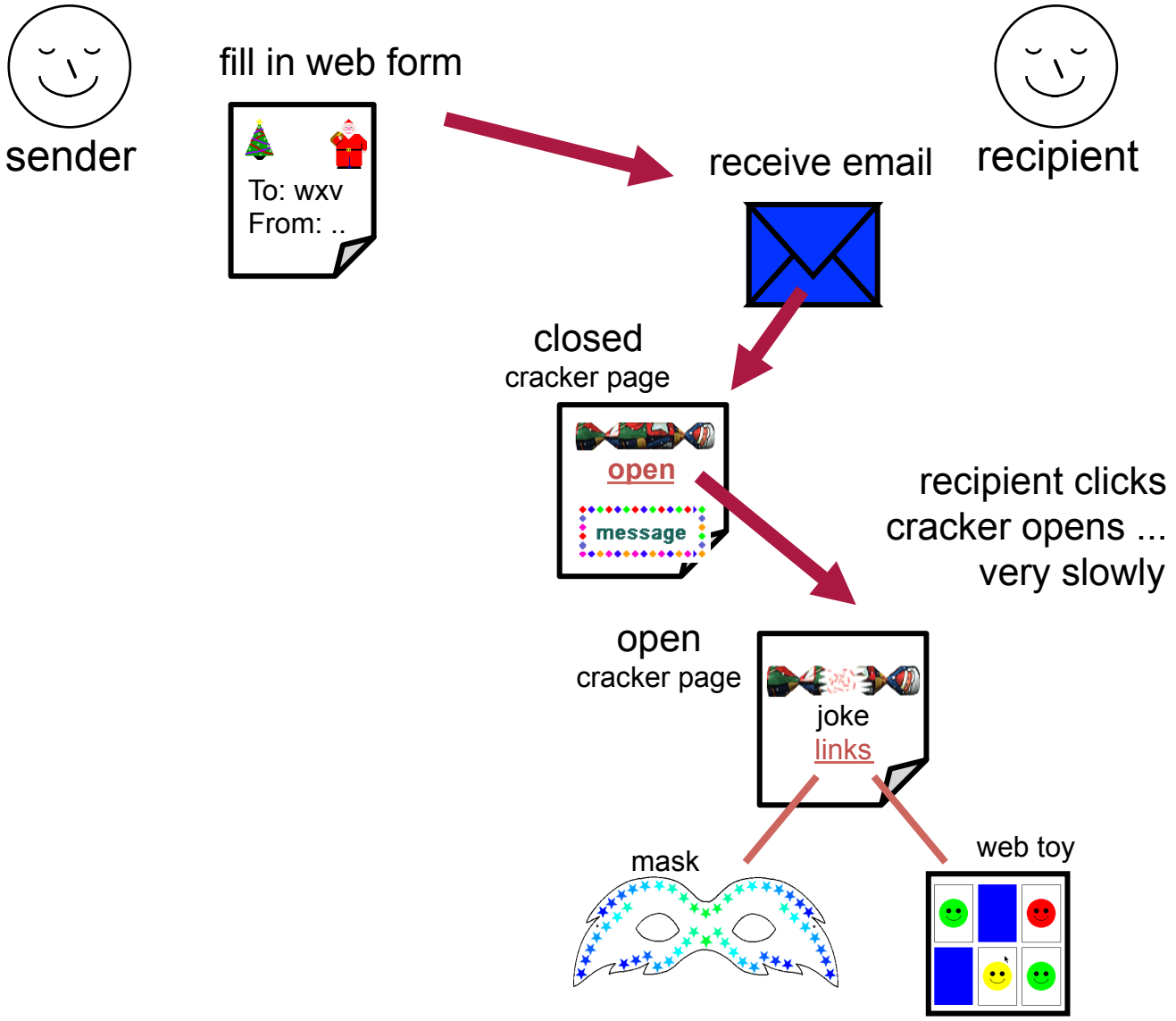
how crackers work



closed cracker page

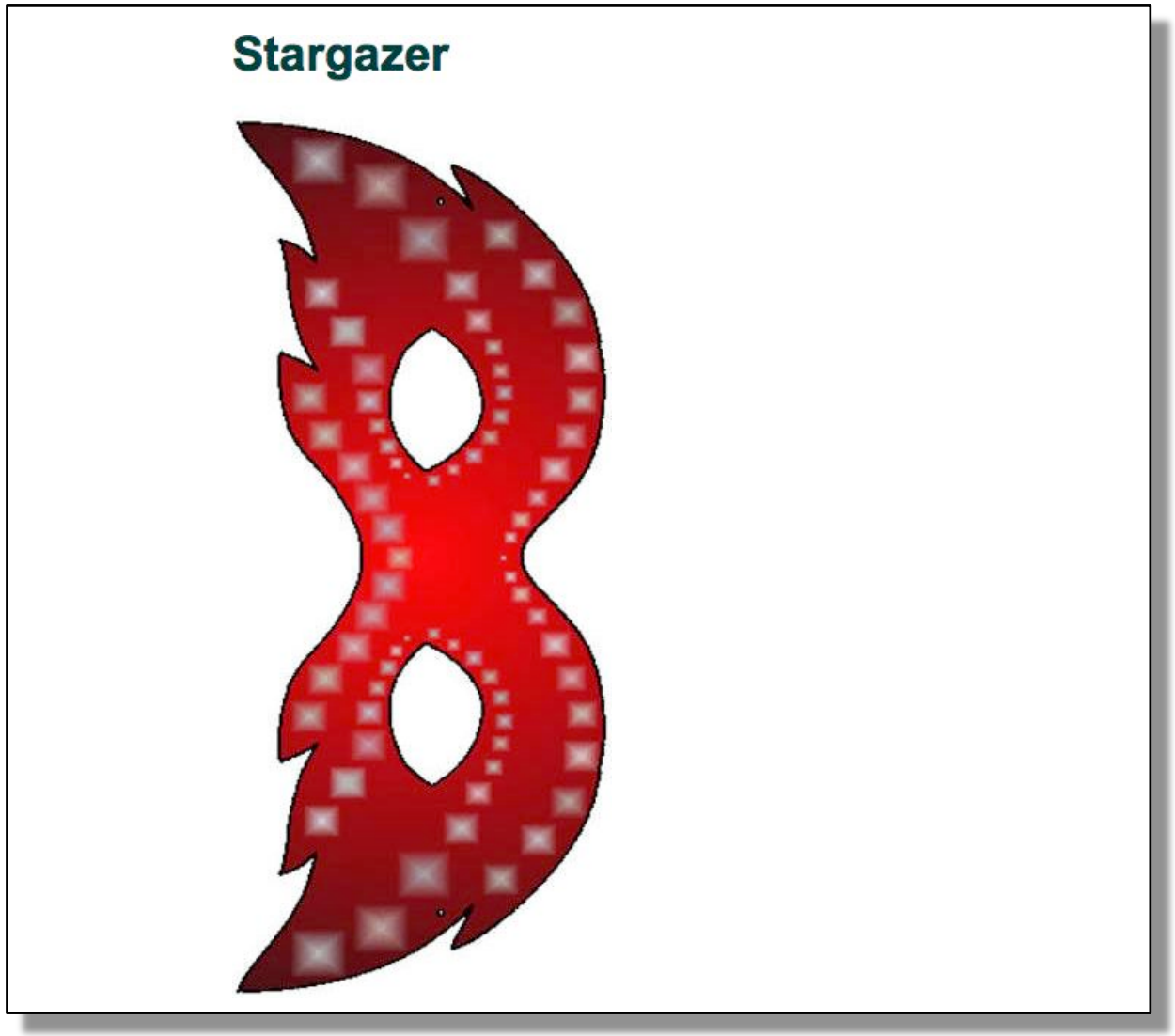


how crackers work

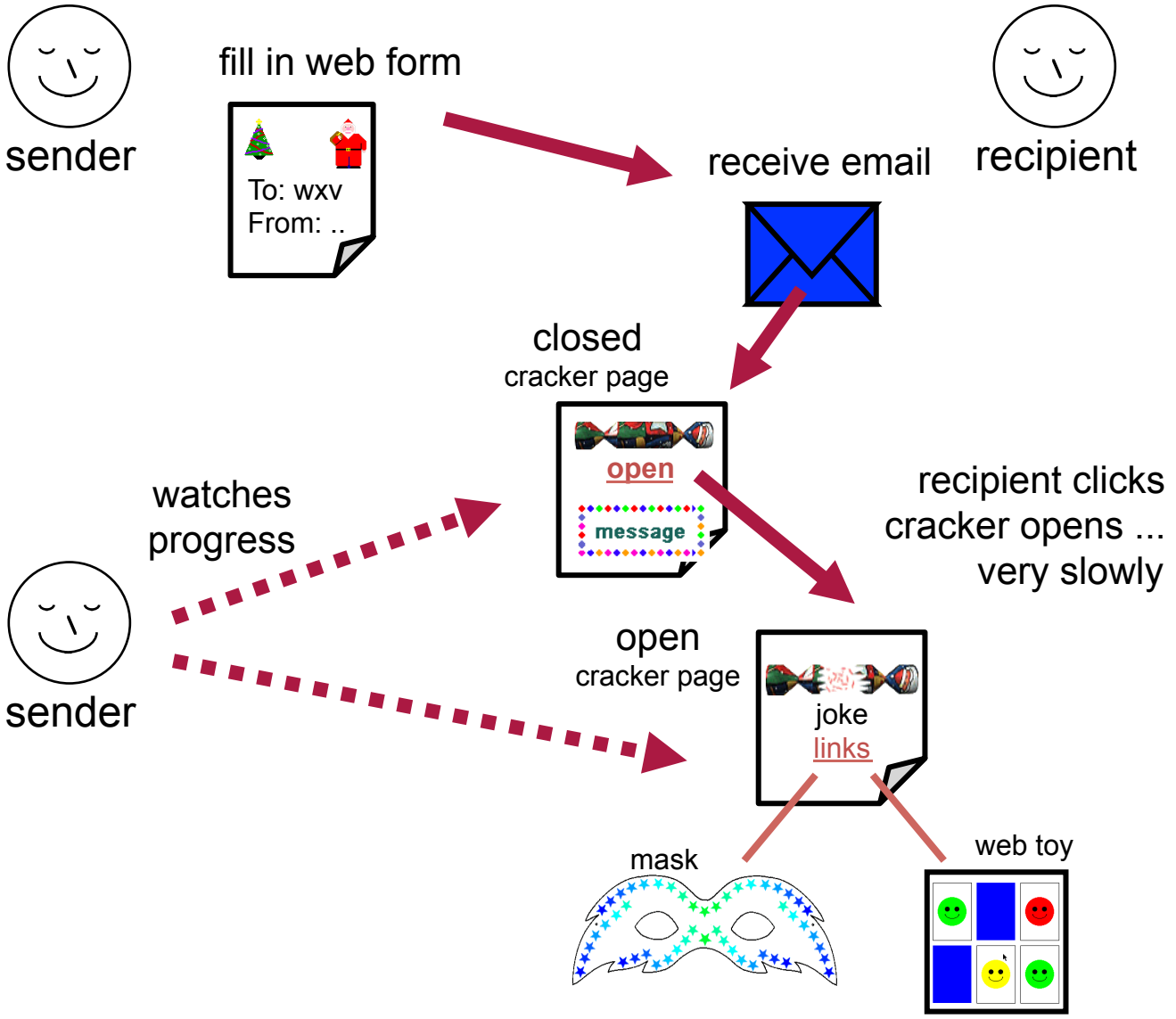


open cracker page

mask page



how crackers work



The crackers experience

	real cracker	virtual cracker
Surface elements		
design	cheap and cheerful	simple page/graphics
play	plastic toy and joke	web toy and joke
dressing up	paper hat	mask to cut out
Experienced effects		
shared	offered to another	sent by email message
co-experience	pulled together	sender can't see content until opened by recipient
excitement	cultural connotations	recruited expectation
hiddenness	contents inside	first page - no contents
suspense	pulling cracker	slow ... page change
surprise	bang (when it works)	WAV file (when it works)

TAPT

teasing apart and piecing together

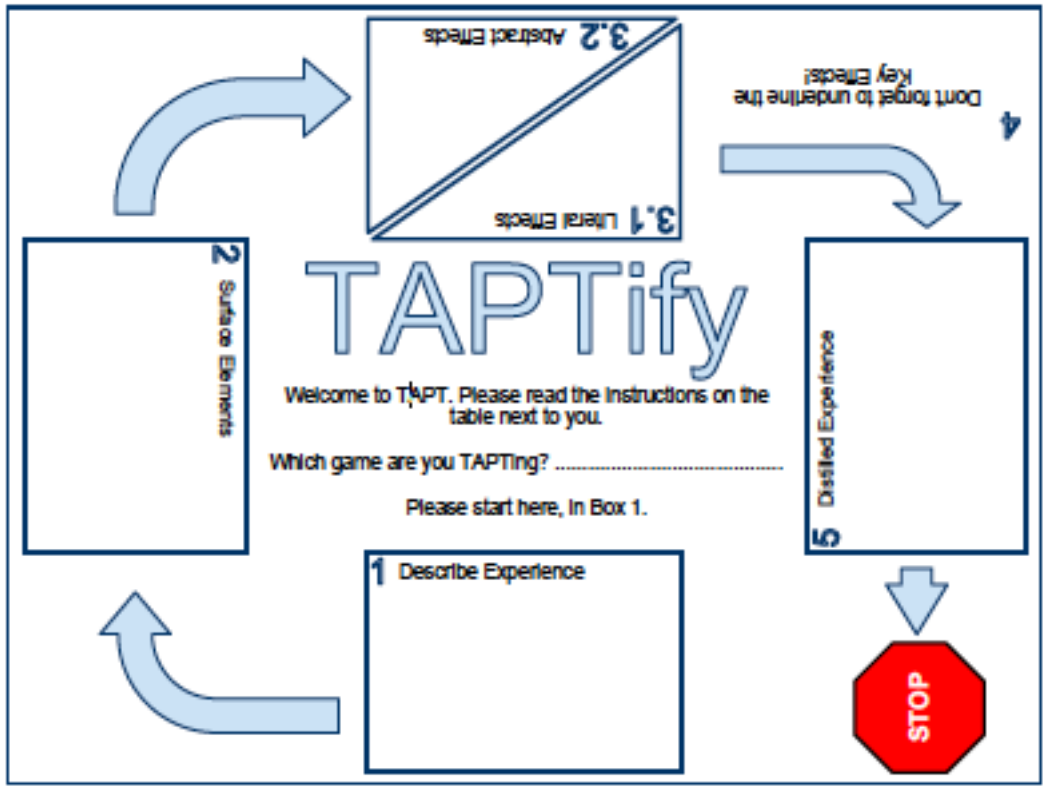
- refinement of deconstruction/reconstruction

  (developed by Clare Hooper @ Southampton and IBM)

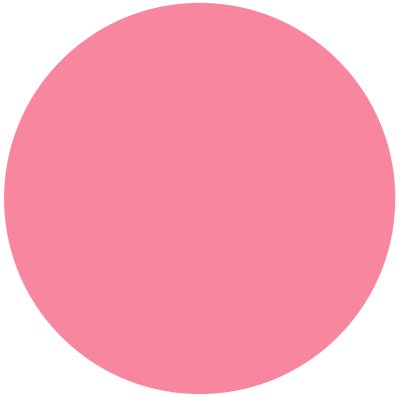
- teasing apart (deconstruction)
  - detailed pro forma
  - divides experienced effects into literal/abstract
- piecing together (reconstruction)

TAPT – detailed pro formas

Description of teasin		
Experience (1) Brief description of the chosen functionality and the experience of using it.	**Surface elements (2)** These are generally nouns ('line', 'box', 'arrangement of photos') and adjectives ('bold', 'simple', 'complex') relating to the design.	**Exp** These focus on intellectual effect to be abstract nou pairs ('hunger s ('quickly'). Ther shown below…
		Literal (3) Concrete results such as a loud noise, 'broadcast information'.
		(Step 5) Review the lists of literal and abstract effects, and identify effects that seem especially important, unique or key to the experience. Underline them.

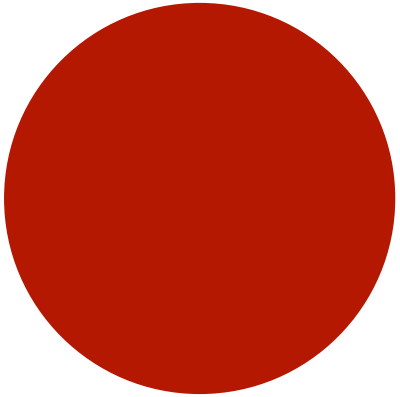


information rather than 'showing' it, because 'showing' implies a visual broadcast.



EXERCISE

- in your groups
  - use TAPT forms to analyse the non-computer experiences from the last exercise
  - do you feel you have learnt from this?
  - does it give you ideas how to create a similar digital experience?
  - ... or maybe inspiration for a novel one.



designing for peak experience

mars bar vs baked bean design

why peak experience always wins

how to design for peak experience

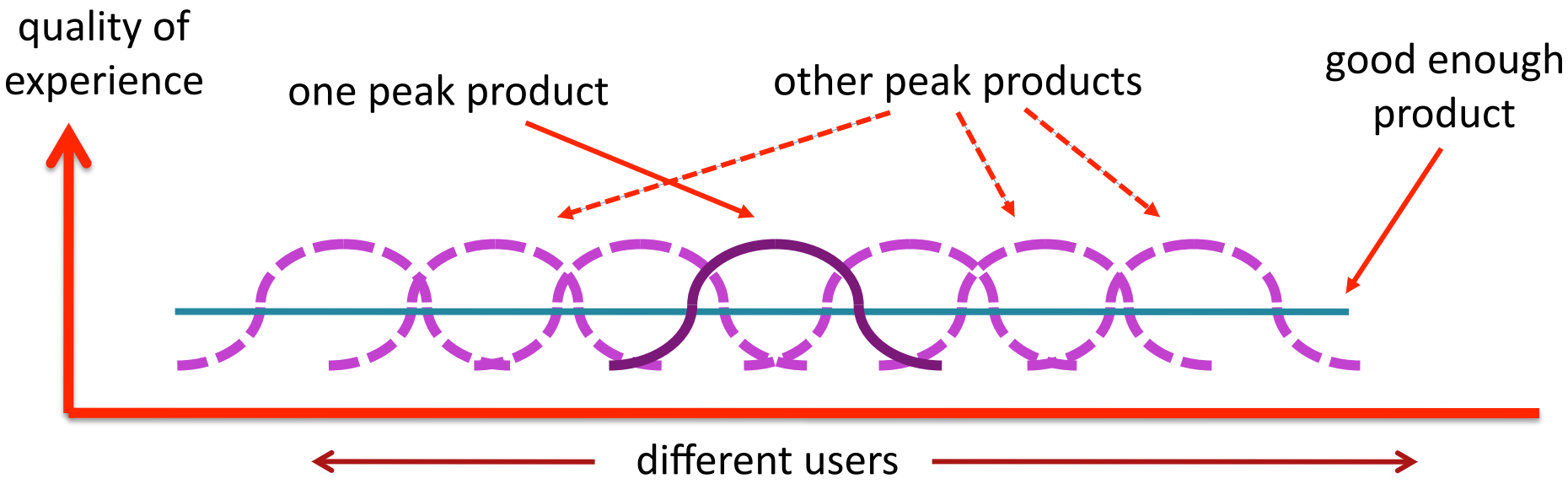
baked bean vs. mars bar design

en.wikipedia.org/wiki/Image:MBar_700.jpg

freefoto.com

- baked bean design
  - things others others choose for us
  - things we have to share
  - corporate software – inc. universities!
  - office systems, government web systems
- mars bar design
  - things we choose for ourselves
  - games, entertainment
  - some web services

who wins?



good enough products never win

for any user, some peak product always better

how to design for peak experience

- traditional interface design
  - user profiles, central personas,
    average and typical,
    process and methods, from need to solution

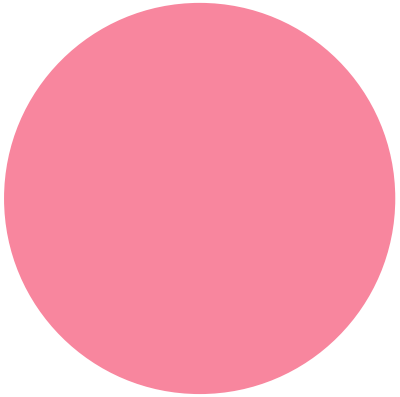
- design for peak experience
  - individual user, niches, extreme personas,
    specific and eclectic
    ideas and inspiration, from concept to use

when to seek peak experience

- individual choice
- user experience central

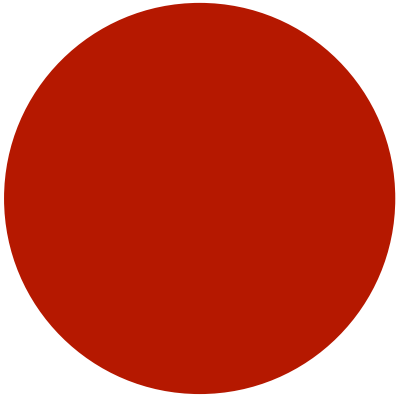
- the long tail

  many applications for smaller groups



EXERCISE

- in your groups discuss:
  - are your experiences peak experiences?
  - if you were designing technology to emulate or support the non-technological experiences, can you think how you might seek a peak experience product?



extended episodic experience

mars bar vs baked bean design

why peak experience always wins

how to design for peak experience

extended episodic experience

work with Haliyana Khalid from her PhD on photologs

> Khalid, H. & Dix, A. (2010) The experience of photologging: Global mechanisms and local interactions. *Personal and Ubiquitous Computing*, 14: 3, 209-226.

also related to Facebook experience (with Corina Sas et al.)

basic issue:

> experiences are not singular and unrelated
> but instead a flow, a stream, a thread

how to understand this?

> no fixed answer
>
> but exploring and seeking the right question

understanding user experience

- Csikszentmihalyi – Flow
  - between boredom and anxiety
  - focused attention, immediate feedback, loss of sense of time
- McCarthy and Wright – technology as experience
  - anticipating – prospective
  - connecting, interpreting
  - reflecting, appropriating, recounting – retrospective
- Dix – deconstructing experience
  - analyse experiential elements (deconstruct)
  - reconstruct in new way

but easy to forget other factors ...

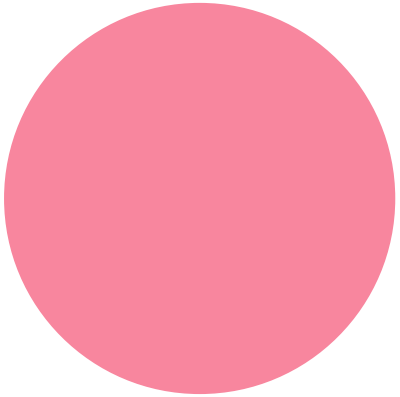
but all about
a single
‘experience’

much of our experience is:

extended – happening over protracted periods

but

episodic– composed of (linked) discrete events



EXERCISE

- in your groups discuss:
  - do the experiences you have discussed fit into bigger extended experiences?
  - try to think of as many different kinds of extended experiences that you have or know about
  - write me a list ☺

related:

Chan's *Social Interaction Design*
foregrounds the flow of individual actions

work on *long-term interaction*
gaps, pace, cross-organisational flows

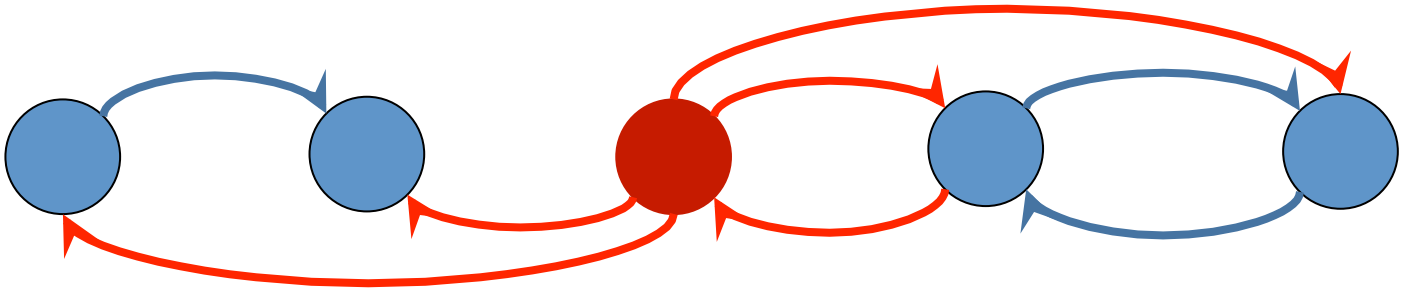
Giaccardi: *pauses* and *duration* in cultural heritage

Steve & Gabriella: *temporal trajectories*

moving towards a theory of extended episodic experience

- interlinked events
- intertwined threads
- significant places

interlinked events



each event is Janus-like

looks back to past experiences (retrospective)

looks forward to future ones (prospective)

c.f. McCathy & Wright

living in the present sounds good, but ...

generosity and reciprocity

"…I bothered to link them; they should bother to link me. It's like Friendster, we put testimony, and they have to put testimony. If this person didn't link me, it's like she is being choosy of friends…"

eee & model of mind

first order – direct

enjoying a picture during browsing

second order – reflective

both prospective “will she feel happy to see this picture?”
and retrospective “why did he write that narrative”

higher order – reflexive

“how will others view my actions/intentions now”

one participant regarded others’ posts as self-exhibitionist (retrospective)
and so worried that she might be seen so (prospective)

c.f. theory of mind

intertwined threads

threads of communication with people

repeated visits to places

crossing media

meeting one another

intermixing contexts

N.B. body chemistry shifts slowly

significant places

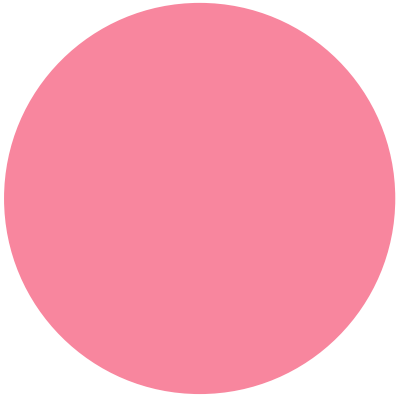
place or space?

- Harrison and Dourish
- Augé: non-places and supermodernity
  shopping malls, airports, ...

spaces of experience become places of significance

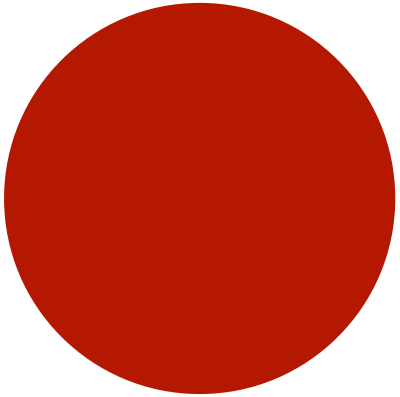
- walking to work through the park each morning
- viewing friends' status on Facebook each day
- Brief Encounter

... also ongoing experience with people



EXERCISE

- in your groups:
  - analyse your extended experiences using the concepts above
  - do they help explain them?
  - what do they miss out?



THE END

you have

- seen why user experience is important
- thought about some theories of emotion
- deconstructed an experience
- looked at peak experience
- and extended episodic experience

and I hope .... had fun ☺